```
5 PRINT"#DSPRITE EDITOR":PRINT"BY ANDY FINKEL":PRINT"(C)1982 BY COMMODORE":IFFLT
HEN105
10 POKE52,48:POKE56,48:CLR:FORI=0TO15:READA$:NEXT
50 FORI=0T0128:READA:POKEI+12#4096,A:MEXT
105 DEFFNA(I)=N*64+3*Y+INT(X/8)+I:DEFFNC(I)=IAND7
110 DEFFMB(J)=-((ZAND2*(7-J))>0)#42-((ZAND2*(7-J))=0)#32
115 DEFFNS(P)=PEEK(P+((J*3+INT(I/8))AND63))AND2*(IAND7)
116 DEFFNM(P)=P+((Y1*3+INT(X1/8))AND63)
117 DEFFNI(I)=(7-IAND7)+(IAND8)+(IAND16)
125 POKE650,128::CL=55296:V=13*4096:Z$="MM ":BL$="M
130 SC=1024:S=2040:POKEV+21,4:POKEV+4,30:POKEV+5,228:POKEV+23,0:POKEV+29,0
140 POKEY+28,0:D=12288:POKES+2,192:N=0:AD=48:FL=1:F=0:L=0:B9=12*4096+1024
146 POKEV+41,5:POKEV+37,2:POKEV+38,7:GOSUB770:GOSUB630
180 CR=SC:X=0:Y=0
190 CS=PEEK(CR):POKECR,CSOR128
200 GETA$: IFA$=""THEN200
205 FORI=1TOLEN(CO$):IFMID$(CO$,I,1)<>A$THENNEXT:GOTO200
206 ONIGOTO550,530,520,580,590,600,610,540,570,560,490,430,450,231,221,251,241
207 ONI-17GOTO340,210,470,215,370,421,587,585,209,300,240,410,395,566,568
210 DN=2:GOSUB690:GOSUB685:PRINT"# $"B$:AD=VAL(LEFT$(B$,1))#16+VAL(MID$(B$,2,1))
:00T0190
215 DN=1:GOSUB690:GOSUB685:PRINT"# "B$:NA$=B$+LEFT$("
                                                         ",6-LEM(B$))
216 OPEN1,8,12,B$+",P,R":GET#1,A$,A$:DN=12:FORI=FTOL:GOSUB685:PRINT"#"I"
217 FORJ=0T063:GOSUB685:GET#1,A#:IFST<>0THEN220
218 A=0:IFA$<>""THENA=ASC(A$)
219 POKE(J+D+I#64),A:NEXTJ,I
220 CLOSE1:GOSUB685:PRINTBL$:GOSUB630:GOTO190
221 DN=5:A=41:GOSUB901:POKEV+A,C:PRINT"# "A*:DN=6:A=37:GOSUB901
225 POKEV+A,C:PRINT"# "A*:DN=7:A=38:GOSUB901:POKEV+A,C:PRINT"# "A*:GOTO190
231 DN=8:GOSUB685:PRINTBL*:GOSUB765:IFA*="YES"THENPOKEV+29,PEEK(V+29)OR4
232 IFA$="MO "THEMPOKEV+29,PEEK(V+29)AMD(255-4)
233 DN=9:GOSUB685:PRINTBL*:GOSUB765:IFA*="YES"THENPOKEV+23,PEEK(V+23)OR4:GOTO190
234 POKEV+23, PEEK (V+23) AND (255-4): GOTO 190
240 POKE650,0:PRINT"3":END
241 DM=10:GOSUB690:A=VAL(B$)
243 POKEV+16,-4*(A)255):POKEV+4,(AAND255):B$=STR$(A):GOSUB685:PRINT"#"B$
244 DN=11:GOSUB690:A=VAL(B$):IFA=0THENA=PEEK(V+5)
245 POKEY+5,A:B#=STR#(A):GOSUB685:PRINT"#"B#:GOTO190
251 DN=4:GOSUB690:T#="HIRES":IFA#="M"THENT#="MULTI"
252 GOSUB685:PRINT"# "T#:POKEV+28,4*-(T#="MULTI"):GOTO190
300 DN=1:GOSUB690:NA$=B$:GOSUB685:PRINT"# "B$:OPEN1,8,12,B$+",P,W":PRINT#1,CMR$<
0)+CHR$(8)
305 DN=12:FORI=FTOL:GOSUB685:PRINT"W"I" ":FORJ=0TO7:A#=STR#(I#8+J+9000)+" DATA"
310 FORK=0TO7:A*=A*+STR*(PEEK(J*8+K+D+I*64))+",":MEXT:A*=LEFT*(A*,LEN(A*)-1)
330 PRINT#1, A$: NEXT: NEXT: PRINT#1, ".END": CLOSE1: GOSUB685: PRINTBL$: GOTO190
340 DN=1:GOSUB690:NA$=B$:GOSUB685:PRINT"# "B$:OPEN1,8,12,B$+",P,W"
350 PRINT#1,CHR$(0);CHR$(AD);:DN=12:FORI=FTOL:GOSUB685:PRINT"#"I"
360 FORJ=0TO63:GOSUB685:PRINT#1,CHR*(PEEK(J+D+I*64)):NEXT:NEXT
365 PRINT#1:CLOSE1:GOSUB685:PRINTBL#:GOTO190
370 DN=3:GOSUB690:FORI=1TOLEN(B$):IFMID$(B$,I,1)<>":"THENNEXT
380 F=ABS(VAL(MID$(B$,1,I-1))):F=F+(F)47)*48
385 L=ABS(VAL(MID*(B*,I+1))):L=L+(L)47)*48
390 GOSUB685:PRIMT"#"STR#(F)":"STR#(L):GOTO190
395 DN=12:GOSUB685:PRINT"調酬關關關於,Y :";:GOSUB660:GOSUB685:PRINT"關關關關關認
                                                                        "BL$
396 FORI=1TOLEN(B$):IFMID$(B$,I,1)<>","THENNEXT:B$=B$+","+B$
397 XO=VAL(MID$(B$,1,I-1)):YO=VAL(MID$(B$,I+1))
398 DN=12:GOSUB685:PRINT"調欄關欄欄的G :";:GOSUB660:GOSUB685:PRINT"UUUUU
                                                                        "BL$
400 DT=VAL(B$)*##/180:C1=COS(DT):C2=SIN(DT)
401 X=0:Y=0:FORI=0T063:POKEB9+I,PEEK(N#8+D+I):POKEN#8+D+I,0:NEXT:FORI=0T023
402 POKEI-(I=0)+839+CL,15:POKEI+840+CL,0
405    FORJ=0TO20:I1=FNI(I)-XO:J1=J-YO:IFFNS(B9)=0THEN409
```

```
406 X1=INT(X0+I1*C1-J1*C2):Y1=INT(Y0+I1*C2+J1*C1):IFX1>230RY1>20THEN409
407 IFX1>230RY1>200RX1<00RY1<0THENPRINT"ERROR"
408 X1=FNI(X1):POKEFNM(N*8+D),PEEK(FNM(N*8+D))OR(21(X1AND7))
409 MEXT: NEXT: POKE863+CL, 15: GOSUB630: GOTO180
410 DN=12:GOSUB685:PRINT"#######MASK:";:GOSUB660:GOSUB685:PRINT"#########
                                                                        "BL$
411 FORI=@TO63:POKEN*64+I+D,PEEK(A*64+I+D)ORPEEK(N*64+I+D):NEXT:GOSUB630:GOTO180
421 DN=12:GOSUB685:PRINT"調購閱關TIME:";:GOSUB695:SP=VAL(B$):N=T
422 GOSUB685:PRINT"調團團團關SPR#":FORN=FTOL:GOSUB685:PRINT"調"STR$(N)" "
423 POKES+2,192+N:GOSUB630:FORJ=0TOSP:NEXT:GETA#:IFSP=0THENGOSUB940
424 IFA$=CHR$(13)THEN426
425 NEXT: GOTO422
"BL$:GOTO190
430 N=N-(NC47):DN=0:GOTO495
450 DN=12:GOSUB685:PRINT"調酬關關關MASK:";:GOSUB660:GOSUB685:PRINT"{關關關關網網
                                                                        "BL$
455 FORI=0T063:POKEN#64+I+D,PEEK(A#64+I+D):NEXT:GOSUB630:GOT0180
476
                                      ":NEXT:PRINTTAB(26)"
475 FORI=1T010:PRINTTAB(26)"
                                                                    ";:B=4:A=4
:C=184
476 PRINT"X":POKEV+16,B:POKEV+4,A:POKEV+5,C:DN=10:GOSUB685:PRINT"X"STR$(B#64+A)"
477 DN=11:GOSUB685:PRINT"#"STR$(C)" ":GOTO190
490 DN=0:GOSUB660:IFA<48THENN=A
495 GOSUB685:PRINTTAB(31)"#"N:POKES+2,N+192:GOSUB638:GOTO188
520 POKECR,32:POKEFNA(D),PEEK(FNA(D))AND(255-21(7-FNC(X))):GOTO580
530 POKECR,42:POKEFNA(D),PEEK(FNA(D))OR(21(7—FNC(X))):GOTO580
540 Y=0
550 X=0:GOTO620
560 FORY=0TO20:FORX=0TO16STEP8:POKEFNA(D).256+NOT(PEEK(FNA(D))):NEXT:NEXT
565 GOSUB630:GOTO180
566 T=X:C=0:FORX=0T016STEP8:I=PEEK(FMA(D)):J=(IAND254)/2+C*128:C=IAND1
567 POKEFNA(D)/J:NEXT:GOSUB630:X=T:GOTO190
568 T=X:C=0:FORX=16T008TEP-8:I=PEEK(FNA(D)):J=(IAND127)#2+C/128:C=IAND128
569 POKEFNAKD>.J:MEXT:GOSUB630:X=T:GOTO190
570 FORY=0T020:FORX=0T016STEP8:POKEFNA(D),0:NEXT:NEXT:GOSUB630:GOT0180
580 X=X+1+(X>22):00T0620
585 T=Y:T1=X:FORY=T+1TO20:FORX=0TO16STEP8:POKEFNA(D)-3,PEEK(FNA(D)):NEXT:NEXT
586 Y=20:FORX=0T016STEP8:POKEFNA(D),0:NEXT:X=T1:Y=T:GOSUB630:GOT0190
587 T=Y:T1=X:FORY=20TOT+1STEP-1:FORX=0TO16STEP8:POKEFNA(D),PEEK(FNA(D)-3)
588 NEXT:NEXT:Y=T:FORX=0T016STEP8:POKEFNA(D).0:NEXT:X=T1:GOSUB630:GOT0190
590 X=X-1-(X<1):GOTO620
600 Y=Y-1-(Y<1):GOTO620
610 Y=Y+1+(Y>19)
620 CS=PEEK(CR):POKECR,CSAND127:CR=SC+X+Y*40:GOTO190
630 REM DISPLAY SPRITE
640 A=N*64+D:POKE167,A-INT(A/256)*256:POKE168,INT(A/256):SYS12*4096:RETURM
660 GOSUB690:A=VAL(B$):RETURN
685 PRINT"M":IFDN>0THENFORKI=1TODN:PRINT"M";:NEXT
686 PRINTTAB(31): RETURN
690 GOSUB685: PRINTBL $: GOSUB685
695 B#="":PRINT"# ##";
700 GETA$:IFA$=""THEN700
710 IFASC(A*)=13THENA*=LEFT*(B*,1):GOSUB685:PRINTBL*:RETURM
720 IFASC(A$)=20ANDLEN(B$)=0THEN700
730 IFASC(A$)=20THENB$=LEFT$(B$,LEN(B$)-1):PRINT"調 ||■W##||::GOTO700
740 IFLEM(B$)>40RASC(A$)<31THEN700
750 B#=B#+A#:PRINT" AL"A#"##";:GOTO700
765 GOSUB690:A*="YES":IFLEFT*(B$,1)="N"THENA$="NO "
766 GOSUB685: PRINT" # "A#: RETURN
770 PRINT"CMN"; :FORI=0TO20
785 PRINT"
                                 B"RIGHT$(STR$(I),1):NEXT
790 PRINT"#012345670123456701234567 ":PRINT
800 PRINT"M"TAB(25)"#MSPRITE EDITOR "Z$
801 PRINTTAB(25)" 🛝 SPR#: 0
802 PRINTTAB(25)"# NAME: "NA$" "Z$
803 PRINTTAB(25)"# ADDR: $3000
```

```
804 PRINTTAB(25)"# RANG: 0: 0
805 PRINTTAB(25)"# TYPE: HIRES
                                 117$
                                 "7$
806 PRINTTAB(25)"Ø FORE: GRN
                                 "Z$
807 PRINTTHB(25)" MLT0: RED
                                 "Z$
808 PRINTTAB(25)" # MLT1: YEL
809 PRINTTAB(25)" # XEXF: NO
                                 1173
                                 11 Z#
810 PRINTTAB(25)" # YEXP: NO
                                 11 7 $
BII PRINTTAB(25)"# XPOS: 30
                                  "Z$
812 PRINTTHB(25)" # YPOS: 228
                                  "7$
814 PRINTTAB(25)" Ø
815 PRINTTAB(26)" WH 4BL MOVE/OR
820 PRINTTAB(26)"BM 5 COLOR/Z
830 PRINTTAB(26)" WA 6BL X-PAND
850 PRINTTAB(26)" MM 75 POSITION
860 PRINTTAB(26)" ## 8 RANGE
885 PRINTTAB(26)" MA 9 L DISPLAY
886 PRINTTAB(26)" WW ALL ADDRESS
887 PRINTTAB(26)" ## BEL SAVE
888 PRINTTAB(14)" ## 1 EDIT" TAB(26)" ## CEL LOAD
890 PRINTTAB(14)" MM 2 NEXT SPR"TAB(26)" MM DEL BYTE
892 PRINTTHB(14)" MM 38% TYPE"THB(26)" MM E8% QUIT"; RETURN
901 GOSUB690: RESTORE: FORC=0TO15: READA$: IFA$<>LEFT$<B$,3>THENNEXT: RESTORE: FORC=0T
OPEEK(V+A)AND15:READA$:NEXT
902 GOSUBESS: RETURN
940 GETH$: IFH$=""THEN940
950 RETURN
1000 DATA BLK, WHT, RED, CYN, PUR, GRN, BLU, YEL, ORN, BRN, RD2, GY1, GY2, GN2, BL2, GY3
1005 DATA 169,20,133,171,164,171,185,87,192,133,169,185,108,192
1010 DATA 133,170,169,0,133,247,164,247,177,167
1020 DATA 133,248,160,7,165,248,57,79,192,240
1030 DATA 4,169,42,208,2,169,32,145,169,136
1040 DATA 16,238,24,165,169,105,8,133,169,144
1050 DATA 2,230,170,230,247,165,247,201,3,208
1060 DATA 211,24,101,167,133,167,144,2,230,168
1070 DATA 198,171,16,182,96,128,64,32,16,8
1080 DATA 4,2,1,32,248,208,168,128,88,48
1090 DATA 8,224,184,144,104,64,24,240,200,160
1100 DATA 120,80,40,0,7,6,6,6,6,6
1110 DRTA 6,6,5,5,5,5,5,5,4,4
1120 DATA 4,4,4,4,4
READY.
```

## generously contributed by michael tomczyk